Work Placement Position
CSU Research -Insider Threat Detection

Charles Sturt University offers a unique work placement opportunity for students to participate in a cutting-edge research project on insider threat detection. This project aims to develop and implement advanced techniques for identifying and mitigating insider threats within organisational networks. Participants will gain hands-on experience with state-of-the-art tools and methodologies in cybersecurity and data science.

Subject:	Session 2 (60): ITC599 (140 Hours)
Specialisation:	Cyber Security, Data Science, Software Development, Networking and AI
Location:	Port Macquarie
Availability:	1 position
Further information:	**Key Responsibilities:** • Assist in the development and deployment of insider threat detection models. • Conduct data analysis and curate datasets relevant to insider threat scenarios. • Collaborate with the research team to refine methodologies and improve detection accuracy. • Participate in regular project meetings and contribute to preparing research reports and presentations. • Implement and test security measures within simulated environments using on-premises systems and IoT devices. **Learning Opportunities:** • Gain practical experience in cybersecurity, data science and governance. • Work with advanced security systems and IoT devices. • Develop skills in data analysis, threat modelling, and security testing. • Enhance understanding of the MITRE ATT&CK framework for threat analysis. • Collaborate with experienced researchers and industry professionals. **Requirements:** • Enrolment in ITC599 at Charles Sturt University. • Strong interest in cybersecurity and data science. • Basic understanding of network security principles and data analysis techniques. • Ability to work both independently and as part of a team. **Position: Cybersecurity CSU Student Research Assistant** • Position: Data Science Student Research Assistant • Project: Insider Threat • Location: Port Macquarie Campus Supervisor: Research Assistant

Position	**Role Overview:** We seek a driven Data Science student to join our Insider Threat Project team. The successful candidate will assist in data collection and analysis, developing machine learning models, creating visualisations, and collaborating with the cybersecurity team to enhance threat detection mechanisms. **Key Responsibilities:** • Manage and monitor servers configured for AD, DNS, DHCP, DLP, Microsoft Exchange, SIEM/SOAR, and Behavioural Analytics/UEBA. • Collect, preprocess, and analyse network traffic and system logs datasets. • Develop and implement machine learning models to detect anomalous behaviour indicative of insider threats. • Collaborate with the cybersecurity team to integrate analytical findings with security measures, including EDR and DLP. • Create visualisations and dashboards to present findings. • Document analytical processes and methodologies used in the research. • Contribute to literature reviews and assist in paper writing using Overleaf. • Stay updated on the latest data science tools and techniques relevant to the project. • Report to the Research Assistant and support their tasks as needed. • Participate in project administration using Notion and facilitate collaboration through Google Chat/Workspace. • Work with servers configured for IoT Hub, Data Collection, and Behavioural Analytics/UEBA. **Qualifications:** • Currently enrolled in a Data Science program. • Strong understanding of statistical analysis and machine learning algorithms. • Experience with data analysis tools like Python (Pandas, NumPy, Scikit-learn), R, or similar. • Familiarity with data visualisation tools like Tableau, Matplotlib, or Seaborn. • Experience with security measures and tools, including EDR and DLP, is a plus. • Strong analytical and problem-solving skills. • Ability to work independently and as part of a team. • Good written and verbal communication skills.
How to apply:	Email cover letter, résumé and academic transcript to: • Dr. Sabih Rehman (sarehman@csu.edu.au); and • Supervisor: Louis Hourany, Lecturer, School of Computing, Mathematics and Engineering. Email: lhourany@csu.edu.au
Start and end date:	01/08/2024 – 25/10/2024